IN THE CLAIMS:

**Please cancel claims 1-11 and 16.**

**Please amend the following claims:**

12. (Twice Amended) An intrinsically safe circuit for use in a hazardous environment, the circuit comprising: a plurality of circuit sectors located in the hazardous environment and which are substantially isolated physically from one another by electrical insulating means, the circuit sectors being electrically connected, directly or indirectly, so as to define at least one power transfer path between each said circuit sector and at least one other said circuit sector; power supply means located in the hazardous environment and connected to at least one said circuit sector; and power limiting means provided between said power supply means and each said circuit sector connected thereto, [and] wherein at least two said circuit sectors having at least one power transfer path defined therebetween have different sparking voltages[;] and the intrinsically safe circuit further includes voltage clamping means [associated with] in each said power transfer path between at least two said circuit sectors having different sparking voltages, for reducing the maximum voltage which may be applied by one of [the two] said at least two circuit sectors to [the other] another of [the two] said at least two circuit sectors.

14. (Twice Amended) An intrinsically safe circuit according to claim ~~12~~, wherein the different sparking voltages of [the] at least two said circuit sectors are of the same polarity and voltage clamping means ~~comprising~~ comprises at least one zener diode ~~is provided~~ for clamping the

voltage in [the] each said power transfer path [therebetween] between two said circuit sectors having different sparking voltages of the same polarity at a level which is less than the higher of the different sparking voltages of the two said circuit sectors.

4. ~~15.~~ (Twice amended) An intrinsically safe circuit according to claim ~~12~~ 1, wherein the different sparking voltages of [the] at least two said circuit sectors are of opposite polarity and voltage clamping means ~~comprising~~ comprises at least one diode ~~is provided~~ for clamping the voltage [ion the] in each said power transfer path [therebetween] between two said circuit sectors having different sparking voltages of opposite polarity at a level which is between the sparking voltages of the two said circuit sectors.

5. ~~17.~~ (Twice Amended) An intrinsically safe circuit [for use in a hazardous environment, the circuit comprising: a plurality of circuit sectors for location in the hazardous environment and which are substantially isolated physically from one another by electrical insulating means, and are electrically connected, directly or indirectly, so as to define at least one power transfer path between each said circuit sector and at least one other said circuit sector, and wherein at least two said circuit sectors having at least one power transfer path defined therebetween have different sparking voltages;] according to claim ~~12~~ 1, including power limiting means in the form of resistor means disposed in each said power transfer path between at least two said connected circuit sectors for limiting the maximum power transfer value therebetween to a value less than a predetermined threshold value at which combustion in said hazardous environment is initiated[; and voltage clamping means associated with each said power transfer path between two said circuit sectors having different sparking voltages,

for reducing the maximum voltage which may be applied by one of the two said circuit sectors to the other of the two said circuit sectors].

18. (Amended) An intrinsically safe circuit according to [claim 1 or] claim ~~12~~, wherein there is used a limited number of connecting wires between each two circuit sectors connected by at least one power transfer path.

---

20. (Amended) A personal computer (PC) incorporating an intrinsically safe circuit according to [claim 1 or] claim ~~12~~.

21. (Amended) A data collector circuit consisting of an intrinsically safe circuit according to [claim 1 or] claim 12.

---

**Please add the following new claims:**

22. (New) An intrinsically safe circuit according to claim ~~12~~, wherein the circuit includes power limiting means in each said power transfer path in the intrinsically safe circuit.

23. (New) An intrinsically safe circuit according to claim ~~12~~, wherein said power limiting means comprises at least one current limiting element.

24. (New) An intrinsically safe circuit according to claim ~~23~~, wherein each said current limiting element comprises resistor means.

25. (New) An intrinsically safe circuit according to claim 23, wherein each said current limiting element comprises fuse means.

26. (New) An intrinsically safe circuit according to claim 12, wherein the circuit includes voltage clamping means in each power transfer path between circuit sectors having different sparking voltages.

27. (New) An intrinsically safe circuit according to claim 12, wherein said electrical insulating means physically separating the circuit sectors comprises air.

28. (New) An intrinsically safe circuit according to claim 12, wherein said electrical insulating means physically separating the circuit sectors comprises an encapsulating material.

29. (New) A method of limiting power transfer in an intrinsically safe circuit for use in an hazardous environment, comprising: providing a plurality of circuit sectors located in the hazardous environment and which are substantially isolated physically from one another by electrical insulating means; electrically connecting the circuit sectors, directly or indirectly, so as to define at least one power transfer path between each said circuit sector and at least one other said circuit sector; supplying power to each said sector, directly or indirectly, so that at least two said circuit sectors having at least one power transfer path defined therebetween are provided with different sparking voltages, including connecting power supply means to at least one said circuit sector; providing power limiting means